

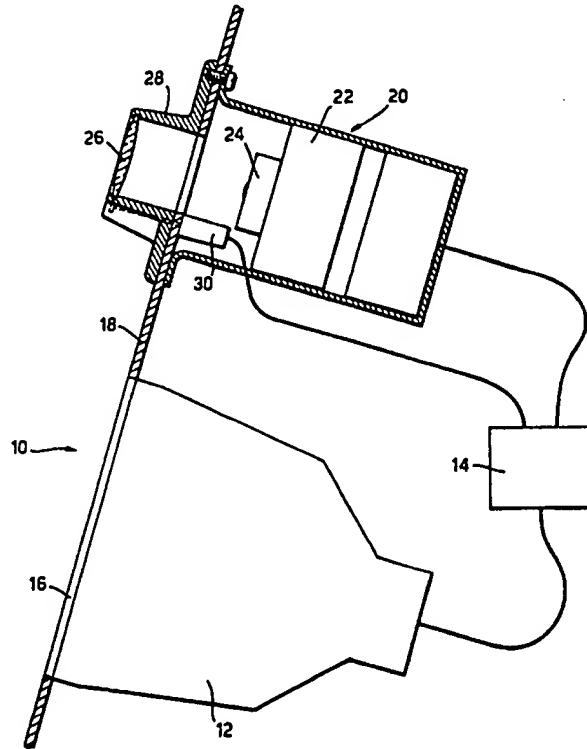
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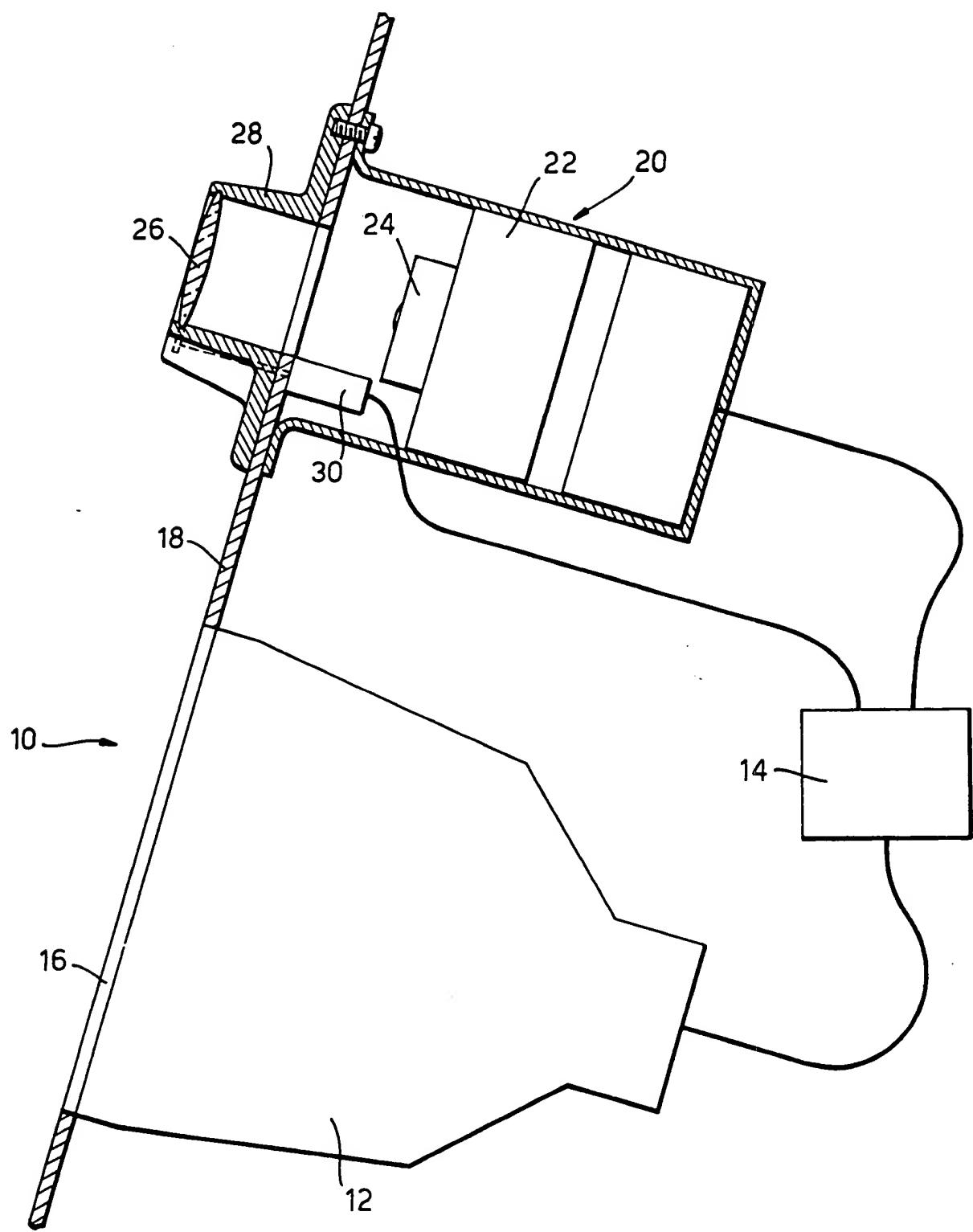
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## (54) Personalisation of moving visual images

(57) Apparatus 10 comprises means such as a computer 14 for providing a first visual image such as a game which is moving, at least in a part thereof, in association with further means such as a camera assembly 20 for providing a second visual image such as a player's face which need not be moving, the first and second visual images being combined by the computer 14 to allow the player to see the combined first and second visual images on a screen 16, thereby personalising the game.



GB 2 287 374 A



Personalisation of moving visual images

The present invention relates to the personalisation of moving visual images and is especially but not 5 exclusively concerned with the personalisation of the moving visual images to be found in amusement machines.

It is known for an amusement machine to be video based, or computer based, to enable a more or less realistic representation of a human or other character to 10 be seen to move on a screen.

It is also known for such a character to be controlled by a player, who may have paid to use the amusement machine, the player manually pressing various switches to cause the character to jump, turn, kick, fire 15 a gun, etc.

There is thus an interaction between the player and the visual image.

Nevertheless, regardless of whether or not there is such an interaction, all players can only see what has been 20 pre-programmed into the amusement machine.

According to the present invention, however, apparatus such as an amusement machine, or other machine, comprises means for providing a first visual image which is moving, at least in a part thereof, in association with further 25 means for providing a second visual image which need not be moving, the second visual image being utilised to effect a desired personalisation of the first visual image.

If the second visual image is of a player's face, the player's face could be superimposed on a screen to give the 30 impression that the player was part of a game, the superimposition of a static visual image onto another static visual image having previously been disclosed in WO 90/10251, to which an interested reader is instructed to refer.

35 In a simple arrangement, the second visual image would be static and would appear in a non-moving part of the

first visual image, such as a poster on a hoarding forming part of a background to a game.

5 The second visual image, however, could be updated at regular intervals, such as every 10 seconds, to give periodically changing displays, or could be continuously updated to give a moving display.

10 The second visual image, moreover, could itself include a desired background, such as a cloth or board actually located behind a player, or the actual background behind the player could be electronically removed.

15 In a more complicated arrangement, the second visual image would be processed by the apparatus to form part of a character which is to be controlled by a player so that the second visual image appeared in a moving part of the first visual image, for example as a face for the character which could look to the left or the right.

20 In all arrangements, the second visual image could be produced by a video camera in or associated with the machine and could be interposed on or in the first visual image to effect the personalisation.

25 The visual image from the camera could be interposed as seen or could first be processed, for example to produce a chroma-keyed image from a fixed colour background. The visual image from the camera could be from an aperture or enclosed area in the machine in which a player, observer or other user is requested to place a part of the body, such as the head, hand or finger. The visual image from the camera could be digitised and fed to a video frame store arranged to store the digitised visual image as a pixel array.

30 The camera may be specific to the preferred application and include just a lens, CCD array integrated circuit and interface board connected with the normal game-controlling electronics of a coin and/or token operated amusement machine.

35 There may be more than one camera, particularly if there is to be more than one player.

Again, in all arrangements, the first visual image may be that, or substantially that, produced in a known machine.

The accompanying schematic sectional view shows an example of apparatus according to the present invention.

The apparatus 10 may be conventional in providing a VDU 12 controlled by a computer 14. A screen 16 of the VDU 12 is carried by a support 18 to allow a player to see a first visual image created by the computer 14. Part of the first visual image seen on the screen 16 may be a representation of a character in a game. In any event, at least part of the first visual image is movable and indeed may be moved under the control of the player.

In this embodiment of the present invention, a second visual image is produced by a camera assembly 20 and is superimposed on the first visual image.

The camera assembly 20 includes a colour camera chip unit 22 of conventional construction. Appropriate focusing is to be provided by a lens 24 and/or a lens 26. If the lens 24 is sufficient, the lens 26 could in fact be plain glass and its housing 28 would then merely be for effect. However, if the lens 26 was to be effective to provide focusing over a range of different depths, it could be moved by a motor 30 controlled by the computer 14.

It will be appreciated that, in use, the first and second visual images are combined by the computer 14 to allow the player to see the combined first and second visual images on the screen 16.

Consequently, if the first visual image is a game and the second visual image is a player's face, the combination of the first and second visual images provides a personalisation of the game.

CLAIMS

1. Apparatus such as an amusement machine, or other machine, comprising means for providing a first visual image which is moving, at least in a part thereof, in association with further means for providing a second visual image which need not be moving, the second visual image being utilised to effect a desired personalisation of the first visual image.
- 5 2. Apparatus according to claim 1, in which the second visual image appears in a non-moving part of the first visual image.
- 10 3. Apparatus according to claim 1, in which the second visual image appears in a moving part of the first visual image.
- 15 4. Apparatus according to any preceding claim, in which the second visual image is static, periodically updated or moving.
- 20 5. Apparatus according to any preceding claim, in which the second visual image is a player's face.
6. Apparatus according to any preceding claim, in which the second visual image is produced by a camera connected to game-controlling electronics in an amusement machine.
- 25 7. Apparatus substantially as hereinbefore described with reference to the accompanying drawing.

**Relevant Technical Fields**

(i) UK Cl (Ed.N) H4F (FGG, FGH, FGJ, FGS, FGT)

(ii) Int Cl (Ed.6) H04N (5/262, 5/268, 5/272)

**Databases (see below)**

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii) WPI

Search Examiner  
MR J M McCANN

Date of completion of Search  
11 MAY 1995

Documents considered relevant  
following a search in respect of  
Claims :-

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**Categories of documents**

X: Document indicating lack of novelty or of inventive step. P: Document published on or after the declared priority date but before the filing date of the present application.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category. E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

A: Document indicating technological background and/or state of the art. &: Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages	Relevant to claim(s)
X P	EP 0640938 A2 (AT & T) see abstract	1

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